



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,735	03/13/2007	Michael Powers	VEC-138-B (RUS0143)	5019

29296 7590 01/19/2011
JULIA CHURCH DIERKER
DIERKER & ASSOCIATES, P.C.
3331 W. BIG BEAVER RD. SUITE 109
TROY, MI 48084-2813

EXAMINER

ROSATI, BRANDON MICHAEL

ART UNIT	PAPER NUMBER
----------	--------------

3744

MAIL DATE	DELIVERY MODE
-----------	---------------

01/19/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/582,735	POWERS ET AL.	
	Examiner	Art Unit	
	BRANDON M. ROSATI	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-12, 14 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-12, 14, and 17-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the amendment filed on 11/3/2010. Currently, claims 10-12, 14, and 17-19 are pending.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 10-12, 14, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moreau (U.S. Patent No. 6,749,015 B2) in view of Dey et al. (U.S. Pub. No. 2003/0217838) in further view of Kun et al. (U.S. Patent No. 4,023,618).

Regarding claims 10, 14, 18, and 19, Moreau disclose in Figures 1 and 3 all the claimed limitations including a headering arrangement comprising a heat exchanger body part (i.e. middle of device), a tank (i.e. fluid chamber) (28), a plurality of tubes (10), a header pan (i.e. manifold) (16) disposed at the end of the tubes, which includes a plurality of slots, is flat, and defines a plurality of collars (20), each of the collars forming a ferrule which surrounds and is in contact with a respective tube, a tank foot (i.e. contour) (30), the plurality of tubes passes through the slots and maintain the tank foot in place (along with the header and manifold plate), the collars being inverted in relation to a line of extension of the tubes, the line of extension defined by a vector that extends away from the respective plurality of tubes of an end segment of the respective one of the plurality of tubes (Column 4, lines 1-63). Moreau does not disclose an essentially flat gasket, a plastic tank or the tank foot directly maintaining the tank foot in place. However, Dey et al. disclose in Figures 4, 6b and 6c, a heat exchanger which has a core comprised of heat exchanger tubes, a header and a gasket (46) and a tank (25) made of plastic

Art Unit: 3744

(Paragraphs [0049] and [0056]). Hence, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the teachings of Moreau with the essentially flat gasket of Dey et al. because adding the gasket would help to ensure a tight fluidly sealed system which would reduce the risk of leakage and thus increase the efficiency of the device and thus increase the overall amount of potential heat transfer. Further, Kun et al. disclose in Figures 8-10, the concept of having the tank foot (i.e. inner tank member) (67) be directly maintained by the tube (i.e. combination of (60/61)) (Column 12, lines 50-68). Hence, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the combined teachings of Moreau and Dey et al. with the directly maintained tank foot of Kun et al. because this configuration would ease assembly and provide a more cost effective and simpler heat exchanger unit (Column 6, lines 44-47). It is noted that the Examiner is deeming the entire combined structure of (60 and 61) as the tube, and thus the tank foot is directly maintained by the tube. It is noted that the phrases "for a heat exchanger" and "for use in automotive application" are statements of intended use and the device is capable of performing the functions.

Regarding claim 11, the combined teachings of Moreau, Dey et al., and Kun et al. disclose a tube having a length that appears to be of less than or about twice the thickness of the header plus tank foot width of the header, but fails to disclose the exact dimensions of the tube or header. Although the exact dimensions are not given, it is obvious from Figure 1 of Moreau and Figure 2 of Dey et al. that tube has a length of less than or about twice the thickness of the header plus tank foot width of the header. Furthermore, it is an obvious mechanical expedient to one of ordinary skill in the art to utilize a tube having a length of less than or about twice the thickness

Art Unit: 3744

of the header plus tank foot width of the header because doing so will ensure a properly functioning tube as well as minimizes the amount of material needed to be used to maximize cost.

Regarding claims 12 and 17, the combined teachings of Moreau, Dey et al., and Kun et al. disclose the header pan comprising at least one flat medallion. It is noted that since the header pan of Moreau is flat, it therefore has a flat medallion. Furthermore, because the Examiner is examining the final product (i.e. the header pan), the steps utilized to make the final product, such as pressing, which is referred to as a medallion are given limited patentable weight in an apparatus claim.

Response to Arguments

4. Applicant's arguments with respect to claims 10-12, 14, and 17-19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 3744

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRANDON M. ROSATI whose telephone number is (571)270-3536. The examiner can normally be reached on Monday-Friday 8:00am- 4:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BMR
1/14/2011

/Cheryl J. Tyler/
Supervisory Patent Examiner, Art Unit
3744